FB
.23'
op. 2

STUDIES OF CENTRAL AMERICAN PLANTS—III

BY

PAUL C. STANDLEY

CURATOR OF THE HERBARIUM, DEPARTMENT OF BOTANY

AND

JULIAN A. STEYERMARK

ASSISTANT CURATOR OF THE HERBARIUM, DEPARTMENT OF BOTANY

BOTANICAL SERIES
FIELD MUSEUM OF NATURAL HISTORY
VOLUME 23, NUMBER 1
JANUARY 14, 1943

PUBLICATION 524

SHOUT
SHARE
IT

STUDIES OF CENTRAL AMERICAN PLANTS—III

BY

PAUL C. STANDLEY

CURATOR OF THE HERBARIUM, DEPARTMENT OF BOTANY

AND

JULIAN A. STEYERMARK

ASSISTANT CURATOR OF THE HERBARIUM, DEPARTMENT OF BOTANY

BOTANICAL SERIES
FIELD MUSEUM OF NATURAL HISTORY
VOLUME 23, NUMBER 1
JANUARY 14, 1943

PUBLICATION 524

THE LIBRARY OF THE
AUG 1 - 1949
UNIVERSITY OF ILLINOIS

PRINTED IN THE UNITED STATES OF AMERICA
BY FIELD MUSEUM PRESS

580.5
FB
v.23
cop.2

STUDIES OF CENTRAL AMERICAN PLANTS—III

Paul C. Standley and Julian A. Steyermark

Most of the new species described on the following pages were collected by the authors during recent exploration in Guatemala, and are published here preparatory to their inclusion in the descriptive *Flora of Guatemala,* whose preparation is now well advanced. Because of present economic conditions, the descriptions and discussions of these new plants have been somewhat abbreviated but they will be extended, if deemed necessary, when treated in that work.

PINACEAE

Juniperus Standleyi Steyermark, sp. nov.—Frutex prostratus vel depressus vel erectus, ramulis ultimis numerosis brevibus densis confertis 1.1–1.4 mm. crassis 5–20 mm. longis; folia adulta ovata vel ovato-rotundata cucullata, apice obtusa vel rotundata, 1.5–1.7 mm. longa, basi 0.8–1 mm. lata, medio depressa, dorso glandulosa, marginibus crassis incurvis minute erosis vel subintegris; folia juvenilia lanceolata subulata acuminata 4–5 mm. longa; bacca coerulescens 7–9 mm. diam., pedicello brevi recurvo pendulo; semina 3–4.—Guatemala: Dept. San Marcos: Upper slopes of Volcán de Tacaná, alt. 4,100–4,400 meters, February, 1940, *Julian A. Steyermark* 36137 (type in Herb. Field Mus.). Collected at various localities in the departments of San Marcos and Huehuetenango, and extending into Chiapas, Mexico.

This has been confused with *J. mexicana* Spreng., also native in Guatemala, which is a tall or medium-sized tree with 1–2-seeded fruit.

ARACEAE

Philodendron Rojasianum Standl. & Steyerm., sp. nov.—Subgenus *Euphilodendron,* Sect. *Pteromischum.* Epiphytica scandens, ramulorum internodiis superioribus ca. 4 cm. longis et 8 mm. crassis; petiolus ca. 16 cm. longus crassus, vagina ca. 1 cm. lata foliacea persistente ca. 1–2 cm. infra apicem soluta atque ca. 1.5 cm. longe protracta, apice obtusissima; lamina tenuiter coriacea rigidula late oblongo-ovata ca. 21 cm. longa et 11–13.5 cm. lata, apice obtusa vel subrotundata et breviter cuspidato-acuminata, basi lata breviter lateque cordata, nervis primariis utroque latere ca. 10 angulo

latissimo abeuntibus tenuibus quam secundariis et tertiariis solemniter crassioribus; pedunculus crassus vix ultra 1.5 cm. longus; spatha oblongo-linearis ca. 14 cm. longa prope basin 2 cm. lata viridis, spadice viridi.—Guatemala: Climbing on tree along a small stream, Finca Pirineos, lower southern slopes of Volcán de Santa María, between Santa María de Jesús and Calahuaché, Dept. Quezaltenango, alt. 1,300–1,500 meters, December, 1939, *Julian A. Steyermark* 33244 (type in Herb. Field Mus.).

This may be only an extreme form of *P. guttiferum* Kunth, but in that the petioles usually are relatively shorter and the ligule of the petiole sheath much less developed. Also related is *P. rigidifolium* Krause of Panama, but that also has a less developed petiole sheath. The ligule of the sheath in *P. Rojasianum* is sometimes as much as 2.5 cm. long. The new species is named for Professor Ulises Rojas, Director of the Jardín Botánico de Guatemala.

AMARYLLIDACEAE

Agave huehueteca Standl. & Steyerm., sp. nov.—Subgenus *Littaea.* Folia numerosa rosulata oblongo-ovata vel obovata ca. 35 cm. longa atque 10 cm. lata, vel minora majorave, suberecta vel adscendentia, subincurva, plus minusve concava, laevia, crassa, fibrosa, griseo-viridia vel glaucescentia, rigida; spina terminalis conica vel elongato-conica 2.5–4 cm. longa basi ca. 6 mm. crassa griseo-brunnea, interdum lucida, superne teres, inferne late sulcata; margen folii late corneo-incrassatus griseus, dentibus plerumque 5–11 mm. longis complanatis griseis latissimis saepe curvis vel recurvis; inflorescentia 3–5-metralis simplex spicata erecta, spica densa elongata, bracteis numerosis, superioribus e basi lata fere setaceis elongatis, floribus fere sessilibus fasciculatis; ovarium fusiforme ca. 12 mm. longum et 4 mm. crassum; perianthii tubus obconicus 5 mm. longus, segmentis anguste oblongis 2–2.5 cm. longis obtusis; stamina longiexserta, antheris fere 2 cm. longis; capsula late ovalis 2 cm. longa 12 mm. lata viridis breviter sulcata; semina semiorbicularia ca. 4 mm. longa.—Guatemala: Dept. Huehuetenango: Open limestone hillside, along Aguacatán road east of Huehuetenango at km. 13–14, altitude about 1,950 meters, January 2, 1941, *Paul C. Standley* 82039 (type in Herb. Field Mus.). Dry rocky hills north of Chiantla, 2,000–2,250 meters, January 6, 1941, *Standley* 82588. Near crossing of Río San Juan Ixtán, east of San Rafael Pétzal, 1,730 meters, January 9, 1941, *Standley* 82857.

Perianth dark purplish green; filaments and style dark purplish red. Only one other species of the subgenus *Littaea* has ever been

reported from Guatemala, *A. dasylirioides* Jacobi & Bouché, and that is an altogether different plant with unarmed leaves. It is quite possible that ultimately *A. huehueteca* will have to be united with one of the Mexican species, but we have been unable to refer it satisfactorily to any of the species of this subgenus listed by Trelease from Mexico.

POLYGONACEAE

Gymnopodium floribundum Rolfe, var. **antigonoides** (Rob.) Standl. & Steyerm., stat. nov. *Millspaughia antigonoides* Rob. Bot. Jahrb. 36, Beibl. 80: 14. 1905.

Triplaris melaenodendron (Bertol.) Standl. & Steyerm., comb. nov. *Vellasquezia melaenodendron* Bertol. Fl. Guat. 40. *pl. 11.* 1840. *T. Macombii* Donn. Smith, Bot. Gaz. 19: 257. 1894.

NYCTAGINACEAE

Mirabilis pulchella Standl. & Steyerm., sp. nov.—Herba vel frutex erectus 30–100 cm. altus ramosus, ramis vetustioribus plus minusve glaucis ad nodos incrassatis, novellis dense pilis plurilocularibus villosis; petioli usque 1.5 cm. longi, foliorum superiorum multo breviores, dense longivillosi; lamina late ovata usque oblongo-ovata vel deltoideo-ovata 3–8.5 cm. longa 2.5–5.5 cm. lata acuta vel acuminata, basi plus minusve inaequali truncata usque obtusa, crassiuscula, utrinque subsparse pilis patentibus villosa, subtus paullo pallidior; pedunculi axillares et in cymulas vel racemos terminales parvos dispositi, usque ad 1.5 cm. longi sed saepius multo breviores dense villosi; involucrum campanulatum vel in statu maturo fere rotatum 7–10 mm. longum viride triflorum villosum, profunde 5-lobum, lobis triangulari-ovatis acutis vel acuminatus ciliatis; perianthium coralloideum roseo-purpureum 1 cm. longum infundibuliformi-campanulatum glabrum vel glabratum; stamina 3 exserta; fructus obovoideus ca. 5 mm. longus et 2.5 mm. latus obtuse 5-costatus, basin versus angustatus, sat dense pilosulus, costis crassis laevibus vel plus minusve corrugatis, sulcis rugulosis.—Guatemala: Dept. Zacapa, brushy rocky slope, near divide on the road between Zacapa and Chiquimula, alt. 500–660 meters, October, 1940, *Paul C. Standley* 73841 (type in Herb. Field Mus.). Dept. Chiquimula, near the same locality as the preceding collection, *Standley* 73748. Dept. Chiquimula, between Ramírez and Cumbre de Chiquimula, on road between Chiquimula and Zacapa, 400–600 meters, *Standley* 74516.

The plant is frequent in the vicinity of the type locality, growing in damp thickets or on brushy rocky slopes. It is rather handsome and showy because of the abundance of rose-purple flowers, which close around noon, as in other species of the genus. Except for the widespread tropical *Mirabilis violacea* (L.) Heimerl, this is the first *Mirabilis* of the subgenus *Oxybaphus* to be reported from Central America. Its relationship is with *M. suffruticosa* Standl., of Oaxaca, which has merely puberulent branches and rounded or obtuse involucral lobes.

PHYTOLACCACEAE

Stegnosperma scandens (Lunan) Standl., comb. nov. *Trichilia scandens* Lunan, Hort. Jam. 2: 320. 1814. *S. halimifolium* Benth. Bot. Voy. Sulph. 17. 1844.

BERBERIDACEAE

Mahonia volcania Standl. & Steyerm., sp. nov.—Frutex erectus pauciramosus 1–2-metralis; folia breviter petiolata, foliolis 2–6-jugis approximatis; foliola rigide coriacea sessilia ovalia usque oblongo-ovalia vel late oblonga 2–4 cm. longa 1–1.7 cm. lata apice rotundata vel late obtusa et spinoso-mucronata, basi rotundata vel late obtusa, in toto margine spinoso-mucronato-serrata, serraturis parvis subadpressis, glabra, supra lucida, venulis prominulis pallidis arcte reticulatis, subtus pallida, nervis venisque prominentibus reticulatis; flores racemosi, racemis sat dense multifloris ca. 3 cm. longis breviter pedunculatis, bracteis bracteolisque parvis inconspicuis acuminatis vel interdum obtusis et denticulatis, pedicellis gracilibus sed rigidulis usque 10 mm. longis; sepala exteriora late ovata 2 mm. longa; petala lutea ca. 6–7 mm. longa; baccae immaturae sessiles glabrae.—Guatemala: Pine forest, slopes of Volcán de Agua along the trail above Santa María de Jesús, alt. about 3,000 meters, February, 1939, *Paul C. Standley* 65221 (type in Herb. Field Mus.); same region, January, 1937, *J. R. Johnston* 580. Region of Chémal, Huehuetenango, 3,300 meters, December, 1940, *Johnston* 1690.

This plant has been confused heretofore with *M. fascicularis* DC., which ranges from southern California southward to Veracruz. It is closely related to that species but apparently uniformly distinct in its small compact leaves, whose leaflets have small and appressed teeth rather than the large spreading ones characteristic of *M. fascicularis*.

Mahonia Johnstonii Standl. & Steyerm., comb. nov. *Berberis Johnstonii* Standl. & Steyerm. Bot. Ser. Field Mus. 22: 140. 1940.

ANNONACEAE

Annona primigenia Standl. & Steyerm., sp. nov.—Arbor usque 10-metralis vel frutex altus, ramulis gracilibus glabris vel primo sparse pilis brevibus adscendentibus indutis; folia modica breviter petiolata membranacea in sicco fuscescentia, petiolo glabro 7–14 mm. longo; lamina elliptica usque lanceolato-oblonga vel obovato-oblonga 8–14 cm. longa 3–6 cm. lata, acuta vel abrupte acutata, interdum acuminata, basi subrotundata usque subacuta, supra glabra sublucida, costa anguste impressa, subtus fere concolor saltem in statu adulto glabra in axillis nervorum obscure domatiata, nervis lateralibus utroque latere ca. 10 teneris; inflorescentiae e medio internodii exeuntes pluriflorae, pedicellis fructiferis glabris 1.5–3 cm. longis rectis; fructus subglobosus 1.5–3 cm. diam., fere laevis vel interdum distinctius areolatus, sparse puberulus vel fere glaber; semina pauca vel numerosa lucida fusco-brunnea ca. 8 mm. longa.—Guatemala (Dept. Petén): Gavilán, Fallabón-Yaxha road, March, 1933, *C. L. Lundell* 2213 (type in Herb. Field Mus.), 2215. Uaxactún, April, 1931, *H. H. Bartlett* 12474.—British Honduras: San Antonio, high ridge, *P. H. Gentle* 569.—Mexico: Tuxpeña, Campeche, December, 1931, *Lundell* 1128.

Called Anonillo in Petén. The fruit is described as russet-colored and edible. It is probable that the species is represented also by *Lundell* 6651 from San Agustín, British Honduras. This specimen is in flower, the flowers being 1.5 cm. long, and like those of *A. reticulata* L., except that they are less densely pubescent.

The relationship of *A. primigenia* is with *A. reticulata* but in that, one of the important fruit trees of all Central America, the fruits are 10 cm. or often much more in diameter. It seems reasonable to assume that the small-fruited tree of the Yucatan Peninsula is a distinct species.

Sapranthus megistanthus Standl. & Steyerm., sp. nov.—Arbor 9-metralis, ramulis novellis dense pilis mollibus subpatentibus ochraceis tomentosis; folia crasse 5–6 mm. longe petiolata membranacea, petiolo dense ochraceo-piloso; lamina oblongo-elliptica 10–14 cm. longa 5.5–7 cm. lata acuta vel obtusa, basi obtusa, supra viridis molliter atque sat dense pilis albidis velutino-pilosa, subtus paullo pallidior ubique dense velutino-pilosa, reticulo venularum eleganter prominulo-reticulato; pedunculi oppositifolii crassi 1.5 cm. longi tomentosi; sepala utrinque tomentella anguste lanceolato-oblonga 2–2.5 cm. longa basi 7 mm. lata nervosa; petala maxima atropurpurea, intus sparse puberula extus subsparse tomentella,

oblanceolato-oblonga 17–19 cm. longa ca. 7 cm. lata, apicem subobtusum versus angustata, basin versus longe attenuata.—Guatemala: On roadside bank, Estancia Grande, Dept. Guatemala, alt. about 600 meters, December 8, 1938, *Paul C. Standley* 59219 (type in Herb. Field Mus.).

Only one tree was observed. The flowers are pendent, dark purple-brown, and have a very strong and offensive, carrion-like odor. The type was determined originally as *S. nicaraguensis* Seem., but more careful examination shows that probably it represents a perfectly distinct species. In that the petals are only half as large, and the sepals are much shorter and relatively broader. The flowers are twice as large as those of any other member of the genus.

MENISPERMACEAE

Hyperbaena vulcania Standl. & Steyerm., sp. nov.—Frutex scandens, ramulis subteretibus puberulis vel dense breviter patentipilosulis, glabrescentibus; folia longipetiolata subcoriacea, petiolo 2–7 cm. longo et ultra pilosulo vel puberulo, serius glabrato, apice paullo incrassato; lamina integra ovalis vel rotundo-ovalis usque ovata vel rotundato-ovata vulgo 9–20 cm. longa atque 5.5–13 cm. lata, apice obtusa vel rotundata et acuminata vel breviter acuminata, basi rotundata usque breviter cordata, interdum obtusa, supra lucida glabra, subtus brunnescens ad nervos pilosula vel puberula vel fere omnino glabra, ima basi 5-nervia, costa supra basin utroque latere nervos laterales vulgo 3 emittente, nervis venisque elevatis gracilibus, venulis prominentibus laxe reticulatis, ultimis reticulum densum prominulum efformantibus; flores feminei racemosi, racemis axillaribus pedunculatis vel sessilibus 7–12 cm. longis laxe paucifloris, rhachi pedicellisque densiuscule pilosiusculis vel brunneo-puberulis, pedicellis crassiusculis 6–15 mm. longis; sepala interiora 5 mm. longa late ovata obtusa dense minute puberula, apicibus recurvis, exterioribus minutis ovatis; carpella densissime breviter pilosa.—Guatemala: Moist forest, a large vine over a tree, near Barranco Hondo, above Las Lajas, Dept. Escuintla, alt. about 1,200 meters, January, 1939, *Paul C. Standley* 63878 (type in Herb. Field Mus.). Dept. Quezaltenango, between Finca Pirineos and Finca Soledad, lower southern slopes of Volcán de Santa María, 1,300 meters, *Steyermark* 33517. Dept. San Marcos, vicinity of Finca El Porvenir, southern slopes of Volcán de Tajumulco, 1,300–1,500 meters, *Steyermark* 37944, 37343, 37535.

Related to *H. hondurensis* Standl., which occurs in northern Guatemala but differs in having pistillate inflorescences with pedicels

only 2–4 mm. long or even shorter. Most of the collections cited above are sterile, but probably belong to *H. vulcania.*

ROSACEAE

Hirtella media Standl., sp. nov.—Arbor glabrata 10–20-metralis, trunco usque 50 cm. diam., ramulis strigillosis vel fere glabris; folia inter minora breviter petiolata coriacea, petiolo ad 4 mm. tantum longo; lamina elliptico-obovata usque elliptico-oblonga saepius paullo supra mediam latissima, 4.5–10 cm. longa 2–5 cm. lata, apice obtusa vel subacuta, basi cuneato-angustata et acuta, supra glabra in sicco fuscescens glabra, costa prominente, subtus fere concolor fere glabra sed saltem ad costam sparse strigosa; inflorescentiae terminales thyrsoideo-paniculatae sat dense multiflorae foliis paullo longiores, ramis dense minute sericeis vel glabratis, interdum elongatis et recurvis, secundifloris, floribus breviter pedicellatis vel sessilibus, bracteis ovatis parvis acutiusculis persistentibus conspicuis; hypanthium obovoideum adpresse pilosulum, sepalis reflexis late ovatis vel rotundo-ovalibus intus minute sericeis obtusissimis; petala late obovata alba vel lavendulacea glabra; stamina 3 longissime exserta; ovarium dense pilosum; drupa juvenilis oblongo-obovoidea apice late rotundata sparse breviterque strigosa.—Honduras: Guarunta, Wispernini Camp, Dept. Colón, alt. 15–23 meters, March, 1938, *Christine & Wolfgang von Hagen* 1378 (type in Herb. Field Mus.).—Mexico: Lobani, Oaxaca, 1841–43, *Liebmann* 1751. Ubero, Oaxaca, alt. 30–90 meters, June, 1937, *Llewelyn Williams* 9480.

Related to *H. triandra* Swartz, a common species of Central America, which has larger long-acuminate leaves. *H. media* is noteworthy for the large size the tree attains, according to data supplied with three collections. Most species of the genus are shrubs of only 2–3 meters, and but few of the species attain such a height as 15 meters. The vernacular names used in Oaxaca are Jicaco and Jicaco prieto.

LEGUMINOSAE

Aeschynomene eriocarpa Standl. & Steyerm., sp. nov.—Annua prostrata, caulibus dense breviter albido-pilosis, pilis paucis longioribus viscidis patentibus intermixtis; stipulae parvae basi non productae late ovatae acutae striato-nervosae; folia parva, foliolis 3–4-jugis late oblongo-obovatis 5–8 mm. longis 3–5 mm. latis, apice late rotundatis, supra glabris, subtus pilis longis albidis subadpressis pilosis; racemi foliis longiores pauciflori, interdum

elongato-racemosi, rhachi valde geniculata dense albido-pilosa et viscido-pilosa, bracteis late ovatis obtusis pilosis; calyx 3 mm. longus dense breviter pilosus; corolla flava 7 mm. longa, vexillo sparse pilosulo; legumen vulgo 3-articulatum densissime albo-tomentosum, articulis isthmo angustissimo junctis semiorbicularibus.—Guatemala: Zacapa, rocky slopes, Santa Rosalía, 2 miles south of Zacapa, alt. 200 meters, October 7, 1939, *Julian A. Steyermark* 29313 (type in Herb. Field Mus.).

Similar in most details to *A. biflora* (Mill.) Fawc. & Rendle, but distinct from that and the several other related species in its densely white-tomentose fruits, which bear no viscid hairs.

Aeschynomene tricholoma Standl. & Steyerm., sp. nov.—Annua erecta ramosa ca. 60 cm. alta, caulibus dense viscido-hispidis; stipulae lineari-attenuatae basi productae striatae pectinato-dentatae hispidulae; foliola ca. 23-juga lineari-oblonga 5–10 mm. longa, obtusa vel subacuta et mucronata, apice denticulata, glabra, costa valde excentrica, nervis subtus prominentibus; racemi elongati laxi foliis subaequilongi, ramis hispidulis, bracteis lanceolato-ovatis longiacuminatis grosse dentatis, dentibus longe setoso-mucronatis; flores 7 mm. longi, calyce bilabiato glabro; vexillum glabrum; legumen marginibus sparse ciliatis exceptis glabrum, uno latere fere rectum, altero profunde constrictum, articulis vulgo 4, interdum 5, semiorbicularibus, laxe et subprominente reticulato-venosis, stipite calyce vix longiore.—Guatemala: Dept. Chiquimula, brushy rocky slope, near the divide on the road from Zacapa to Chiquimula, alt. 660 meters, October, 1940, *Paul C. Standley* 73714 (type in Herb. Field Mus.). Dept. Jutiapa, region of El Tablón, northeast of Jutiapa, alt. 900 meters, damp thicket, October 31, 1940, *Standley* 75840.

In general appearance as well as in most details this is exactly like *A. americana* L. but it differs in having uniformly much broader pods, of somewhat distinctive appearance, and it is believed that a good species, perhaps of very local distribution, is represented.

Bauhinia Herrerae (Britt. & Rose) Standl. & Steyerm., comb. nov. *Schnella Herrerae* Britt. & Rose, N. Amer. Fl. 23: 206. 1930.

Canavalia munda Standl. & Steyerm., sp. nov.—Frutex scandens, caulibus glabris, petiolis foliolis brevioribus; foliola oblongo-elliptica vel oblongo-ovata 8–13 cm. longa 4–6 cm. lata acuminata vel anguste longiacuminata, basi rotundata vel obtusa, longi-petiolulata, glabra, subtus sparse albido-punctata; racemi nodosi

folia aequantes vel longiores; calyx campanulatus 10–12 mm. longus subdense sericeus, labio superiore tubo multo breviore emarginato, labio inferiore brevi, lobis 3 ovatis obtusis; corolla lilacina fere 3 cm. longa, vexillo lato ad anthesin reflexo; legumen 13–16 cm. longum 3 cm. latum, dense pilis fusco-brunneis velutino-pilosum, breviter stipitatum, valvis 3-costatis, costa media a sutura ventrali 7–8 mm. remota; semina late ovalia compressa castanea lucida 12–15 mm. longa 9–12 mm. lata, hilo fusco 5 mm. longo.—Guatemala: Dept. Quezaltenango: Finca Pirineos, low southern slopes of Volcán de Santa María, between Santa María de Jesús and Calahuaché, alt. 1,300–1,500 meters, December, 1939, *Julian A. Steyermark* 33179 (type in Herb. Field Mus.). Several other collections seen from the departments of Quezaltenango and San Marcos, western Guatemala.

Related to *C. villosa* Benth., in which the leaflets usually are abundantly pubescent and not punctate.

Climacorachis guatemalensis Standl. & Steyerm., sp. nov.—Herba annua erecta usque 80 cm. alta simplex vel ramosa, interdum suffrutescens, praeter inflorescentiam glabra; stipulae angustae 1 cm. longae prope medium affixae; foliola ca. 20-juga 6–8 mm. longa 1.5 mm. lata oblique acuta 3-nervia sessilia; racemi pauciflori flexuosi folia aequantes vel longiores, rhachi viscido-setulosa, pedicellis longis gracilibus; bracteae ovatae setuloso-ciliatae; calyx 3 mm. longus viscido-setulosus; legumen oblongum 1.5–2 cm. longum 5–7 mm. latum parum compressum, apice oblique rotundatum vel truncatum, densiuscule viscido-setulosum, pilis basi dilatatis et nigrescentibus; semina globosa 2 mm. diam. opaca nigro-olivacea.—Guatemala: Dept. Huehuetenango: Pine-oak forest, Río Pucal, about 14 km. south of Huehuetenango, alt. about 1,800 meters, January, 1941, *Paul C. Standley* 82330 (type in Herb. Field Mus.); also no. 82370 from the same locality.

Two other members of this genus are known, each from a single collection made in Jalisco, Mexico. Both differ from the Guatemalan plant in their narrower fruit which is more or less constricted along the ventral margin.

Inga Skutchii Standl., sp. nov.—Arbor 9-metralis, ramulis novellis pilis mollibus brevibus fulvis adscendentibus sat dense pilosis; folia inter minora ca. 12–13 cm. longa, rhachi dense pilis subadpressis fulvis pilosa, inter paria foliolorum glandula parva subglobosa elevata onusta; foliola parva 6–8-juga membranacea lanceolato-oblonga vel anguste elliptico-oblonga, terminalia paullo

majora, infima valde reducta, media et terminalia 3.5–5.5 cm. longa 1.2–2 cm. lata, apicem versus breviter vel longius angustata, apice ipso anguste obtuso et mucronato-apiculato, basi subinaequali obtusa vel anguste rotundata, supra ad costam breviter pilosa, aliter glabra, subtus paullo pallidiora sparse, ad costam densius, pilis parvis rigidis subadpressis hirtello-pilosa, costa nervisque lateralibus prominulis; flores albi spicati, spicis solitariis vel fasciculatis 10–11 cm. longis ca. 3 cm. longe pedunculatis remote laxeque multifloris, rhachi dense breviter adpresso-pilosa; calyx anguste tubulosus 5 mm. longus sparse hirtellus, lobis ovatis acutiusculis tubo bene brevioribus; corolla ca. 13 mm. longa dense strigosa, lobis ovatis acutis vix ultra 2 mm. longis; stamina ca. 3.5 cm. longa.—Costa Rica: By a forest stream, basin of El General, Prov. San José, alt. 675–900 meters, March, 1940, *Alexander F. Skutch* 4823 (type in Herb. Field Mus.).

An exceptionally distinct species for the genus; easy of recognition among Costa Rican ones because of the combination of numerous small leaflets and elongate, remotely flowered spikes.

Pachecoa Standl. & Steyerm., gen. nov.—Frutices erecti ramosi pilosi; stipulae lineari-subulatae striato-nervosae; folia imparipinnata, foliolis paucis integris mucronatis exstipellatis herbaceis; flores flavi, pedunculis axillaribus rigidis plerumque 2-floris; bracteae parvae lanceolatae rigidae, bracteolis subulatis vel fere filiformibus denticulatis; calyx basi attenuatus et stipitiformis, profunde 5-lobus, lobis lanceolato-attenuatis, 4 subaequalibus, infimo paullo longiore et angustiore; vexillum suborbiculare extus pilosum unguiculatum, alis oblique obovatis, carina incurva obtusa; stamina in tubum clausum connata, antheris ovalibus uniformibus; ovarium sessile pauciovulatum, stylo elongato, stigmate minuto terminali; legumen linearioblongum subtetragonum, suturis rectis, articulis quadratis dense breviter pilosis.—Type species, *Pachecoa guatemalensis* Standl. & Steyerm.

The genus is dedicated to Don Mariano Pacheco Herrarte, Director General de Agricultura de Guatemala, who for many years has labored with signal success to improve agricultural conditions in this republic. His celebrated gardens, and particularly their fine collection of orchids, are one of the most interesting sights to be seen in Guatemala City. His exhibits of orchids and other ornamental plants and of agricultural products of Guatemala supply each November one of the most attractive and instructive sections of the Feria Internacional that draws so many visitors from all Central America as well as from Mexico and the United States.

This genus is obviously related to *Chapmannia* Torr. & Gray, confined to Florida. *Chapmannia* is a herbaceous plant with similar leaves but with a long, terminal, wand-like, almost naked inflorescence; the calyx is closed in bud, and has very short, broad teeth; the legume is glandular-muricate and deeply constricted into ovoid subterete joints. *Pachecoa* is a tall shrub with hard stems and small axillary inflorescences; the calyx is open in bud and has long narrow lobes; the legume is merely pilose, not at all constricted between the seeds, the joints being quadrate and in cross section somewhat tetragonous.

Pachecoa guatemalensis Standl. & Steyerm., sp. nov.—Frutex erectus 2–3-metralis, ramis striatis dense pilosis et sparse pilis viscidis luteis patentibus setulosis; stipulae persistentes adpresso-pilosulae 5–8 mm. longae; folia parva breviter petiolata; foliola vulgo 3–5 alterna breviter petiolulata late elliptica vel ovalia 13–25 mm. longa 7–14 mm. lata, apice rotundata et mucronata, basi obtusa vel rotundata, supra viridia pilosa et sparse setulosa, subtus dense pilis albidis subadpressis laxis pilosa; pedunculi folia aequantes vel breviores, pilosi et setulosi; calyx ca. 8 mm. longus pallide viridis adpresso-pilosus et sparse supra medium setulosus, lobis tubum fere aequantibus angustis attenuatis setoso-ciliatis; petala pallide aurantiaca, vexillo ca. 15 mm. longo extus dense piloso; legumen 1.5 cm. longum apice rostro 4–5 mm. longo auctum, 3–4 mm. latum, sessile, dense pilis brevibus non viscidis subpatentibus pilosum.—Guatemala: Dept. Jutiapa: Damp thicket near Jutiapa, alt. 850 meters, October, 1940, *Paul C. Standley* 75307 (type in Herb. Field Museum); also no. 75032 from the same locality.—Mexico: "Río Taba" (locality not certainly decipherable), 1841–43, *Liebmann*.

The plant is abundant in thickets at the northeastern edge of Jutiapa, where it forms dense stands of considerable extent on some of the hillsides.

DICHAPETALACEAE

Dichapetalum Brenesii Standl., sp. nov.—Frutex vel arbor 4–8-metralis, trunco usque 20 cm. diam., cortice laevi griseo, ramulis brunnescentibus sat gracilibus densiuscule sericeis vel strigosis, glabrescentibus, internodiis plerumque brevibus; stipulae parvae cito deciduae; folia modica breviter petiolata in sicco fusca sublucida crasse membranacea, petiolo crassiusculo vulgo 5–7 mm. longo; lamina elliptico-oblonga vel lanceolato-oblonga media vel paullo supra mediam latissima vulgo 7–15 cm. longa et 3.5–6 cm.

lata subabrupte longiacuminata, basin acutam versus angustata, supra ad costam nervosque strigosa, aliter glabra vel glabrata, venulis prominulis, subtus concolor ad nervos venasque strigosa vel fere omnino glabra; cymae parvae vulgo dense multiflorae, petiolo fere omnino cum pedunculo adnato, ramis dense sordide sericeis, floribus breviter crasseque pedicellatis congestis; bracteae parvae lineares extus tomentellae; sepala 2–2.5 mm. longa extus dense albido-tomentosa; drupa clavata vel anguste obovato-oblonga 2.5–3.5 cm. longa dense sordide adpresso-tomentulosa vix compressa.—Costa Rica: Zarcero, alt. 1,950 meters, deep forest, April, 1937, *Austin Smith* 4120 (type in Herb. Field Mus.). La Palma de San Ramón, March, 1929, *A. M. Brenes* 6766. La Ventolera, southern slope of Volcán de Poás, 1,700 meters, wooded quebrada, *Standley* 34723, 34674. Zarcero, *Austin Smith* 4104, 366519. Las Lajas de Zarcero, 1,575 meters, *Smith* 746. La Brisa de Zarcero, 2,200 meters, *Smith* H971.—Panama: Progreso, Chiriquí, *Cooper & Slater* 172.

Heretofore the Costa Rican tree has been identified with *D. Donnell-Smithii* Engler, of Guatemala. It is, however, more closely related to *D. chiapasense* Standl., which ranges from Chiapas to British Honduras and Honduras, but is sufficiently distinct in its acute-based leaves and larger, narrower, minutely tomentulose fruit. *D. Donnell-Smithii*, confined so far as now known to Guatemala, has much larger and relatively broader, thin, densely pilose leaves. *D. Brenesii* is called Blancito in Panama. The corolla is described as white to cream-colored or pale yellow.

SAPINDACEAE

Serjania lobulata Standl. & Steyerm., sp. nov.—Frutex alte scandens, ramis subteretibus, novellis minute cano-puberulis; corpus lignosum simplex teres; folia pinnatim 5-foliolata, petiolo ut rhachi nudo puberulo; foliola inferiora longiuscule petiolulata, superiora sessilia, rhombea vel rhombeo-ovata, interdum oblongo-elliptica, 4–10 cm. longa 2–6 cm. lata, acuta vel obtusa, basi truncata usque acuminata vel cuneatim attenuata, grosse remoteque crenulata vel fere lobata, supra sat dense puberula, subtus pallidiora ubique dense breviter pilosula; thyrsi foliis breviores dense ochraceo-tomentulosi, cincinnis longipedunculatis paucifloris, bracteis minutis, pedicellis brevibus; sepala dense cano-tomentulosa 3.5–4 mm. longa suborbicularia apice rotundata; petala alba 5 mm. longa glabra intus glandulis parvis conspersa; fructus late cordatus ca. 2 cm. longus atque 2.5 cm. latus superne parum angustatus, loculis duris

subglobosis dense hirtellis rugoso-venosis, dissepimentis latis, alis tenuibus dense puberulis infra loculos non constrictis.—Guatemala: Dept. Chiquimula, near the divide on the road from Zacapa to Chiquimula, brushy rocky slope, alt. about 660 meters, October, 1940, *Paul C. Standley* 73715 (type in Herb. Field Mus.). Dept. Zacapa, rocky slopes near Santa Rosalía, 250–300 meters, October, 1939, *Steyermark* 29019; vernacular name Chilmecate.

Related to *S. Schiedeana* Schlecht. of Mexico, which has a different stem structure, much denser and more abundant pubescence, smaller flowers, and larger fruits.

Serjania macrocarpa Standl. & Steyerm., sp. nov.—Frutex scandens, ramis obtuse trigonis dense pilis subpatentibus brunneo-pilosis vel subtomentosis; corpus lignosum e centrali magno subtereti et peripheric is 3 parvis compositum; folia biternata, petiolo nudo, rhachi anguste marginata; foliola lanceolato-oblonga usque obovato-elliptica vel oblongo-elliptica 5–13 cm. longa 2.5–5.5 cm. lata acuminata vel abrupte acuminata, basi attenuata ad acuta, sessilia, subgrosse remoteque crenato-serrata, supra sublucida tantum ad nervos puberula, subtus pallidiora sat dense velutino-pilosa; flores non visi; fructus ambitu late cordatus ca. 4 cm. longus et 4.5 cm. latus ubique dense molliter pilosulus vel ad loculos tomentosus, loculis triangularibus dorso acutissimis et subalatis, dissepimentis latissimis, alis tenuibus infra loculos non angustatis conspicue venosis.—Guatemala: Los Amates, Dept. Izabal, February 23, 1908, *W. A. Kellerman* 7532 (type in Herb. Field Mus.).—British Honduras: Vaca, El Cayo District, on hill slope, March, 1938, *P. H. Gentle* 2291.

The fruits are distinctive and not similar to those of any Mexican or Central American species of which we have seen material. They are unusually large and remarkable for the large hard seed-bearing portion, which is triangular in cross section and almost winged dorsally, the partition walls being relatively broader than in most species of the genus.

MALVACEAE

Pseudabutilon inornatum Standl. & Steyerm., sp. nov.—Frutex 1.5–3 m. altus ramosus, ramis pallidis dense pilis stellatis valde inaequilongis tomentosis; folia longipetiolata membranacea, petiolo 2.5–11 cm. longo; lamina late ovata vel rotundo-ovata 6–17 cm. longa 5–12 cm. lata acuminata vel longiacuminata, basi breviter cordata, crenato-dentata, inferioribus interdum angulatis vel breviter trilobis, supra viridis sparse minute stellato-puberula,

subtus paullo pallidior sparse vel subdense stellato-hirtella; flores in racemos elongatos interruptos paniculatos dispositi, plerumque aggregati, breviter pedunculati, pedunculis calyce vulgo brevioribus stellato-pilosis; calyx in statu fructifero campanulatus carpidia arcte amplectens 5 mm. longus dense stellato-hispidulus, breviter 5-lobatus, lobis latissime ovatis acutis; fructus 6–8-carpidiatus ca. 5 mm. altus et 6 mm. latus, carpidiis apice late rotundatis dorso densissime stellato-hirtellis; semina uniseriata; carpidia dissepimento a dorso oriente fere perfecte 2-locularia.—Guatemala: Near Amatitlán, Dept. Guatemala, alt. 1,170 meters, December, 1938, *Paul C. Standley* 61425 (type in Herb. Field Mus.); also no. 61400 from the same locality, growing in dry forest; *John R. Johnston* 1714.—Mexico: Río de Santa María, near Zacuapan, Veracruz, rocky soil, November, 1906, *C. A. Purpus* 2239.

Evidently referable to the subgenus *Abutilastrum*, and related to *P. paniculatum* (Rose) R. E. Fries of western Mexico. In that the fruit consists of 10–11 carpels which are acute or sharply angulate at the apex, while in *P. inornatum* they are broadly rounded, without any indication of an angle, and fewer.

GARRYACEAE

Garrya corvorum Standl. & Steyerm., sp. nov.—Frutex 2-metralis, ramulis crassis lucidis, novellis dense pilis albidis subadpressis indutis; folia parva rigide coriacea breviter petiolata, petiolo 3–5 mm. longo piloso; lamina oblonga vel elliptico-oblonga 2.5–4.5 cm. longa 1–1.5 cm. lata, apice obtusa vel subacuta et apiculata, basi obtusa vel anguste rotundata, supra lucida fere glabra, costa nervisque manifeste impressis, subtus opaca sat dense pilis albidis subadpressis pilosa, costa prominente, nervis lateralibus parum prominentibus inconspicuis, venis obsoletis; racemi masculi 3–3.5 cm. longi breviter pedunculati simplices terminales solitarii ubique dense pilis longis albidis pilosi; bracteae latissime ovatae usque 8 mm. longae alte connatae, cuspidato-acutae.—Guatemala: Dept. Huehuetenango, dense rocky (limestone) *Juniperus* forest, along the road in the region of Chémal, Sierra de los Cuchumatanes, at km. 36, altitude about 3,300 meters, December, 1940, *Paul C. Standley* 81651 (type in Herb. Field Mus.).

Only one shrub of the species was found. The only other species known from Central America, *Garrya laurifolia* Hartweg, differs in having much narrower bracts in the racemes, and much larger leaves in which the venation is not impressed or scarcely so.

CLETHRACEAE

Clethra bimatris Standl. & Steyerm., sp. nov.—Arbor 12-metralis, trunco 30 cm. diam., ramulis densissime pilis longis laxis sordide brunneis tomentosis; folia magna petiolata membranacea, petiolo crasso 1.5–2.5 cm. longo dense piloso; lamina oblongo-obovata usque anguste oblanceolato-oblonga 12–21 cm. longa 3–8 cm. lata, supra medium latissima, apicem versus plus minusve angustata, apice ipso obtuso usque acuto, basin versus late cuneato-angustata, basi ipsa obtusa vel anguste rotundata, margine basali utroque anguste recurvo, integra vel apicem versus remote serrata, supra viridis in sicco fusca primo sparse hirsuta glabrescens, sublucida, subtus glaucescens atque sordido-brunnescens, ubique tomento laxo non adpresso induta, costa nervisque brunneis atque tomentosis, nervis lateralibus utroque latere ca. 17 valde obliquis et adscendentibus fere rectis vel leviter curvis prominentibus, venis teneris manifestis; racemi numerosi elongati laxi paniculam amplam usque 28 cm. longam efformantes, rhachi pedicellisque dense brunneo-stellato-tomentosis, pedicellis rectangule divaricatis 4–5 mm. longis gracilibus; calyx extus dense brunnescenti-tomentosus ca. 3 mm. longus, lobis ovalibus obtusissimis; petala calyce paullo longiora glabra, apice eroso-dentata et ciliata.—Guatemala: Entre Ríos, Dept. Izabal, July, 1927, *Henry Kuylen* 151 (Yale School of Forestry No. 10744; type in Herb. Field Mus.).—British Honduras: Temash River, in secondary forest, altitude 30 meters, August, 1935, *William A. Schipp* 1343.

This has been reported from Guatemala as well as from British Honduras under the name *Clethra lanata* Mart. & Gal., a Mexican species, not definitely known to occur in Guatemala or British Honduras. In that the flowers are conspicuously larger and the leaves relatively broader and generally rounded or broadly rounded at the apex.

Clethra licanioides Standl. & Steyerm., sp. nov.—Arbor 9-metralis, ramulis crassis dense brunneo-tomentosis; folia modica breviter petiolata rigide coriacea, petiolo crasso 1–1.5 cm. longo dense brunneo-tomentoso; lamina rotundo-obovata 8–10 cm. longa 5–7 cm. lata, apice latissime rotundata vel truncata et minute emarginata, basin versus paullo angustata, basi ipsa anguste rotundata vel obtusa, supra sublucida in sicco sublutescens ubique pilis minutis vix perspicuis depresso-stellatis conspersa, costa nervisque manifestis sed non elevatis, subtus viridis ubique pilis majusculis sat dense velutine stellato-pilosa, nervis lateralibus utroque latere

ca. 13 fere rectis angulo semirecto adscendentibus, venis prominulis; racemi usque 25 cm. longi laxiflori numerosi paniculam magnam latamque efformantes, rhachi dense brunneo-tomentosa, pedicellis ca. 5 mm. longis divaricatis vel subadscendentibus, floribus saepius nutantibus; calyx 4–5 mm. longus dense stellato-tomentellus, segmentis late ovatis vel ovalibus obtusissimis; petala glabra magna sepalis paullo longiora apice laciniata et erosa.—Guatemala: Dept. Jalapa, Potrero Carrillo, 13 miles northeast of Jalapa, altitude 1,500–1,700 meters, December 12, 1939, *Julian A. Steyermark* 33124 (type in Herb. Field Mus.).

Local name, Zapotillo. The flowers are fragrant, the petals white, the sepals buff with a slight tinge of pink. The relationship of the Guatemalan tree is with *C. lanata* Mart. & Gal., which has smaller flowers and relatively narrower leaves.

SOLANACEAE

Athenaea physocalycia (Donn. Smith) Standl. & Steyerm., comb. nov. *Brachistus physocalycius* Donn. Smith, Bot. Gaz. 90: 8. 1905.

Athenaea viscida (Standl.) Standl. & Steyerm., comb. nov. *Capsicum viscidum* Standl. Carnegie Inst. Wash. Publ. 461: 84. 1935.

Lycianthes cuspidata (Morton) Standl. & Steyerm., comb. nov. *Solanum cuspidatum* Morton in Lundell, Contr. Univ. Mich. Herb. 4: 25. 1940.

Lycianthes hondurensis (Morton) Standl. & Steyerm., comb. nov. *Solanum hondurense* Morton in Lundell, Contr. Univ. Mich. Herb. 4: 26. 1940.

Physalis campanula Standl. & Steyerm., sp. nov.—Herba ut videtur perennis laxe ramosa procumbens, caulibus pilis longis viscidis albidis patentibus dense villosis; folia longipetiolata, petiolo 1–4 cm. longo viscido-villoso; lamina late ovata 3–7.5 cm. longa 2–5 cm. lata, subacuta usque longiacuminata, basi late rotundata, integra vel undulata, interdum remote sinuato-dentata, supra viridis sparse breviter villosa, subtus concolor sparse breviterque villosa; pedicelli floriferi gracillimi 1.5–2 cm. longi dense viscido-villosi; calyx ad anthesin 1 cm. longus campanulatus dense pilis patentibus viscido-villosus, basi subtruncatus, dentibus tubo lato paullo brevioribus triangularibus longe anguste acuminatis; corolla tubuloso-campanulata 18 mm. longa apice 8 mm. lata, extus breviter viscido-villosula, intus glabra, limbo remote obtuso-dentato; stamina prope basin

corollae inserta, filamentis filiformibus paullo inaequalibus, antheris paullo ultra 3 mm. longis; calyx fructifer late ovoideus immaturus 2 cm. longus et 16 mm. latus, ut videtur teres et vix angulatus dense viscido-villosus, basi non depressus, apice abrupte contractus, lobis ca. 5 mm. longis fere subulatis.—Guatemala: Dry banks along upper part of Quebrada Canjulá, between Sibinal and Canjulá, Volcán de Tacaná, Dept. San Marcos, alt. 2,200–2,500 meters, February, 1940, *Julian A. Steyermark* 36067 (type in Herb. Field Mus.).

The species is noteworthy for its narrowly campanulate corolla, slightly contracted at the apex and altogether unlike the corolla usual in this genus. The fruit, however, i.e. the fruiting calyx, is quite typical for the genus, and there is no good reason for attempting to refer the plant to some other group, which could be done on the basis of corolla form alone.

Physalis carnosa Standl. & Steyerm., sp. nov.—Annua prostrata dense ramosa fere glabra, caulibus crassis ca. 15 cm. longis carnosis subgeniculatis, novellis scaberulis; folia parva carnosa, petiolis crassis usque ad 15 mm. longis; lamina late ovata usque ovato-oblonga plerumque 1–2 cm. longa et 5–12 mm. lata, obtusa vel subacuta, basi cuneata vel obtusa, saepe valde inaequilateralis, primo minute scaberula, cito glabrata, nervis lateralibus utroque latere ca. 3 crassis subtus prominentibus; pedicelli floriferi 3–4 mm. longi minute puberuli, fructiferi vix longiores; calyx florifer 2.5 mm. longus obscure puberulus, dentibus anguste triangularibus acuminatis tubo paullo brevioribus; corolla ut videtur campanulata vix ultra 3 mm. longa; calyx fructifer ca. 12 mm. longus et 8 mm. latus late ovoideus basi non depressus glabratus arcte reticulato-venosus, obtuse pentagonus, dentibus brevibus conniventibus triangularibus acutis. —Guatemala: On sand dunes along the seashore, Ocós, Dept. San Marcos, March, 1940, *Julian A. Steyermark* 37766 (type in Herb. Field Mus.).

In technical characters, particularly its small flowers and fruiting calyces, this evidently is close to *P. Lagascae* Roem. & Schult. and *P. micrantha* Link. Those, however, are normally erect or ascending plants with delicate and very thin leaves. The leaves of *P. carnosa* as pressed are exceedingly irregular in outline, so much so that it is difficult to ascribe to them any normal leaf shape.

Physalis lassa Standl. & Steyerm., sp. nov.—Ut videtur vulgo perennis sed interdum annua, erecta vel procumbens vel decumbens,

ramosa, caulibus dense pilis brevibus vel longiusculis eglandulosis patentibus pilosa vel subvillosa; folia petiolata, petiolo usque 2 cm. longo dense villosulo; lamina late ovata vel ovata 3–6 cm. longa 2–4.5 cm. lata acuta vel interdum obtusa, basi late rotundata vel subcordata, supra dense pilis brevibus mollibus villosula, subtus pilis paullo longioribus pilosa vel interdum fere puberula; pedicelli floriferi ca. 5 mm. longi dense villosi, fructiferi usque ad 13 mm. longi; calyx florifer ca. 9 mm. longus dense albido-villosus, lobis tubo paullo longioribus anguste triangularibus acutis vel acuminatis; corolla late campanulata ca. 14 mm. longa, extus sparse villosula vel fere glabra; calyx fructifer 3–3.5 cm. longus 2 cm. latus dense villosulus vel breviter pilosus, basi vix depressus, obtuse pentagonus, dentibus ca. 8 mm. longis triangularibus acutis vel acuminatis; bacca fere 1 cm. diam.—Guatemala: Dept. Jalapa, grassy thickets, between Jalapa and Montaña Miramundo, alt. 1,500–2,000 meters, December, 1939, *Julian A. Steyermark* 32868 (type in Herb. Field Mus.). Dept. Guatemala, *Ignacio Aguilar* 213. Sierra de las Minas, near San Gerónimo, Dept. Baja Verapaz, 1,140 meters, *W. A. Kellerman* 6656. Dept. Zacapa, grassy places, lower slopes of Sierra de las Minas, along trail above Río Hondo, 250–900 meters, *Steyermark* 29545.

This species bears some relationship to the Mexican one that has been referred to *P. peruviana* L. That South American species, however, does not occur in Mexico or Central America, so far as the available specimens show. *P. peruviana* differs from the Guatemalan plant here described in its much broader and conspicuously cordate leaves and in its larger and relatively broader fruiting calyx.

Solanum decurtatum Standl. & Steyerm., sp. nov.—Frutex ut videtur omnino inermis, ramis sat gracilibus, vetustioribus ochraceis, novellis dense pilis stellatis ochraceis sessilibus vel breviter stipitatis aequaliter ramosis tomentosis; folia solitaria integra vel vix undulata membranacea, petiolo 1–2 cm. longo dense stellato-tomentoso; lamina elliptico-oblonga vel ovali-oblonga prope mediam latissima 5–8 cm. longa 2–3.5 cm. lata apice rotundata vel obtusa, interdum breviter acutata, basi plus minusve inaequali obtusa vel subacuta abrupte in petiolum contracta, supra viridis sat dense pilis parvis aequalibus stellatis tactu asperulis induta, subtus grisea dense molliterque pilis intertextis stellato-tomentosa, nervis lateralibus utroque latere ca. 7; inflorescentia terminalis vel pseudolateralis cymosa, interdum densa atque umbelliformis 3 cm. tantum lata,

saepius dichotomo-ramosa et usque 6 cm. lata, multiflora, ramis plus minusve elongatis et secundifloris dense griseo-stellato-tomentosis, pedicellis fructiferis usque 8 mm. longis; calyx fere 3 mm. longus densissime stellato-tomentosus, dentibus triangularibus subacutis brevibus; corolla ut videtur alba extus dense stellato-pilosula ca. 7 mm. longa stellata, lobis angustis sensim attenuatis intus glabris; stamina distincta glabra, antheris fere 5 mm. longis oblongo-linearibus sursum vix angustatis; bacca glabra globosa lucida 5–6 mm. diam.—Guatemala: Lago de Yaxha, Petén, March, 1933, *C. L. Lundell* 2012 (type in Herb. Field Mus.).—British Honduras: Corozal District, 1931–32, *P. H. Gentle* 121, 253.

A relative of *S. racemosum* Jacq. of the West Indies, which has usually much longer, mostly acute or acuminate leaves and anthers 7–9 mm. long.

RUBIACEAE

Borreria vegeta Standl. & Steyerm., sp. nov.—Herba annua erecta 30–60 cm. alta et ultra simplex vel pauciramosa, caulibus crassis subteretibus sparse laxeque albido-pilosulis vel glabratis; stipularum vagina laxa 5 mm. longa, setis paucis erectis aequilongis onusta laxe pilosa; folia herbacea, interdum usque 1 cm. longe petiolata, petiolo lato marginato; lamina lanceolato-oblonga usque ovata vel oblongo-elliptica 3.5–7.5 cm. longa 1.2–2.8 cm. lata attenuato-acuminata, basi cuneatim contracta, supra sparse scabra vel glabrata tactu aspera, costa nervisque subimpressis, subtus pallidior ad costam nervosque scabra vel hispidula, nervis lateralibus 6–7 valde obliquis prominentibus; capitula plerumque terminalia, interdum quoque ex axillis superioribus nascentia 2–2.5 cm. lata dense multiflora, floribus breviter pedicellatis; bracteae capitulorum terminalium foliis similes et aequimagnae, vulgo 4; hypanthium oblongum saltem superne villosulum; sepala 4 ovalia usque suborbicularia vel rotundato-obovata viridia apice rotundata dense pectinato-ciliata glabra vel glabrata; corolla alba ca. 2.5 mm. longa extus glabra, lobis ovatis acutiusculis; antherae bene exsertae; capsula ovalis vel late oblonga 3 mm. longa superne villosula vel glabra membranacea calyce persistente coronata; semina teretia 2 mm. longa fusco-ferruginea profunde transverso-rugosa.—Guatemala: Dept. Jutiapa, between Jutiapa and La Burrera, northeast of Jutiapa, alt. 800 meters, November, 1940, in damp thicket, *Standley* 76007 (type in Herb. Field Mus.). Vicinity of Jutiapa, 850 meters, *Standley* 75041. Near El Molino (Dept. Santa Rosa), Dept. Jutiapa, 600 meters, wet thicket, *Standley* 78447. Dept. Santa Rosa, along the

Avellana road south of Guazacapán, 150 meters, weedy field, *Standley* 79475.

Because of the transversely rugose seeds as well as habit and general appearance, it is obvious that this plant is related to *B. laevis* (Lam.) Griseb. That, however, is a less stout plant, usually decumbent or procumbent, with conspicuously smaller flower heads and narrow, usually much smaller sepals.

Bouvardia Pachecoana Standl. & Steyerm., sp. nov.—Frutex metralis glaber; vagina stipularis ca. 4 mm. alta setis paucis 2–2.5 mm. longis aucta; folia opposita membranacea, petiolo 4–8 mm. longo; lamina ovata vel oblongo-ovata 5–10 cm. longa 2.2–4 cm. lata acuta vel acuminata, basi obtusa vel acuta et interdum breviter decurrens, utrinque in statu sicco pallida, nervis lateralibus utroque latere vulgo 3 prominulis, margine adpresso-ciliato; inflorescentia terminalis cymoso-corymbosa dense multiflora, bracteis pro parte foliaceis, pedicellis usque 6 mm. longis; hypanthium obovoideum 1.5 mm. longum basi obtusum; sepala ca. 3 mm. longa erecta triangulari-linearia attenuata viridia; corolla salmoneo-coccinea, tubo 16–18 mm. longo extus glabro sursum sensim dilatato ad faucem usque 3 mm. lato, lobis suberectis ovatis vel oblongo-ovatis ca. 5 mm. longis obtusis; stylus et stamina inclusa.—Guatemala: Dept. San Marcos, in a wet, densely forested quebrada, Barranco Eminencia, along the road between San Marcos and San Rafael Pie de la Cuesta, in upper part of the barranco between Finca La Lucha and Buena Vista, alt. 2,500–2,700 meters, February, 1941, *Paul C. Standley* 86226 (type in Herb. Field Mus.).

A well-marked species, not very closely related to any other of Guatemala or southern Mexico. From *B. dictyoneura* Standl. it differs in its obviously petiolate leaves, acute at the base or contracted and decurrent, and not reticulate-veined. The plant is a particularly handsome one because of its abundance of bright salmon-red flowers. It is named for Don Mariano Pacheco Herrarte, Director General de Agricultura of Guatemala, to whom we are indebted for many favors.

Crusea setosa (Mart. & Gal.) Standl. & Steyerm., comb. nov. *Borreria setosa* Mart. & Gal. Bull. Acad. Brux. 11, pt. 1: 131. 1844. *Spermacoce setosa* Hemsl. Biol. Centr. Amer. Bot. 2: 60. 1881. *Crusea cruciata* Wats. Proc. Amer. Acad. 25: 152. 1890. *B. chiapensis* Brandeg. Univ. Calif. Publ. Bot. 10: 417. 1924.—While no specimen of *Galeotti* 2627, type of *Borreria setosa*, has been seen, there is in the Herbarium of Field Museum an excellent photograph of a

specimen of this number from the Paris herbarium. This, in association with the original description, shows clearly that the species represented is the same as the one that has passed as *Crusea cruciata* Wats., a plant of wide distribution in Mexico and Central America.

Hillia macrocarpa Standl. & Steyerm., sp. nov.—Frutex epiphyticus omnino glaber, ramis crassis ochraceis; folia in sicco coriacea, petiolo crasso ca. 4–7 mm. longo; lamina elliptico-oblonga vel oblanceolato-oblonga 6–8.5 cm. longa 2–3.5 cm. lata, acuta vel subacuminata, basi cuneato-angustata, prope vel paullo supra mediam latissima, supra plana, nervis subtus obscuris planis, lateralibus paucis angulo angustissimo adscendentibus; capsula breviter crasse pedicellata anguste cylindracea 8–9 cm. longa, medio fere 1 cm. crassa, apice breviter angustata, basin versus longe sensimque angustata.—Guatemala: Dept. Quezaltenango, lower south-facing slopes of Volcán de Santa María, between Santa María de Jesús and Calahuaché, along the great barranco between Finca Pirineos and Patzulín, alt. 1,300–1,500 meters, January, 1940, *Julian A. Steyermark* 33667 (type in Herb. Field Mus.).

Local name Jazmín. Leaves fleshy, coriaceous, rich grass-green above, paler beneath, with whitish green at base in the center; capsule pale green. Growing on a ridge in a cafetal. The relationship is with *Hillia loranthoides* Standl. of Costa Rica, which has capsules less than half as long.

Psychotria Aguilarii Standl. & Steyerm., sp. nov.—Frutex 1–1.5 m. altus ramosus, ramis gracilibus, novellis glabris; stipulae caducae ca. 1 cm. longae membranaceae ferrugineae glabrae, primo folia calyptratim involventes, serius fissae; folia membranacea, petiolo 5–12 mm. longo glabro fere ad basin marginato; lamina oblanceolata vel oblongo-oblanceolata 8–12 cm. longa 2–3.5 cm. lata longe angusteque attenuato-acuminata, basin versus longe anguste attenuata et longe decurrens, supra viridis glabra, nervis manifestis sed non elevatis, subtus pallidior glabra sed in axillis domatiatis nervorum sparse breviter barbata, nervis lateralibus pallidis utroque latere ca. 11 angulo semirecto vel paullo latiore adscendentibus, ad costam interdum sparse hirsuta; inflorescentia terminalis sessilis laxa pauciflora usque 4.5 cm. longa e basi pauciradiata, ramis glabris, bracteis parvis caducis, floribus ut videtur fere omnibus sessilibus dense ad apices ramulorum aggregatis; calyx cum hypanthio vix ultra 1 mm. longus glaber truncatus et remote obscure dentatus hypanthio obovoideo-conico paullo brevior; corolla alba extus glabra infundibuliformis 5 mm. longa fauce non

barbata, lobis 1.5 mm. longis obtusis ovato-ovalibus suberectis intus glabris; fructus intense ruber globosus 6 mm. diam., pyrenis dorso grosse granulatis ecostatis.—Guatemala: Dept. Chimaltenango: Damp wooded barranco along the road between Chimaltenango and San Martín Jilotepeque, alt. 1,500–1,700 meters, December, 1940, *Paul C. Standley* 80900 (type in Herb. Field Mus.).—Dept. Sacatepéquez: Near Barranco Hondo, southeast of Alotenango, 1,000–1,250 meters, *Standley* 65024.—Dept. Guatemala: Without locality, in 1939, *José Ignacio Aguilar* 215. Near Finca La Aurora, 1,500 meters, *Aguilar* 126.

The species is related to *P. nervosa* Swartz, to which it bears much superficial resemblance, but in that the fruits are conspicuously costate and longer than thick. In that species, too, there is usually ample pubescence on some parts of the plant.

Psychotria erecta (Aubl.) Standl. & Steyerm., comb. nov.—*Ronabea latifolia* Aubl. Pl. Guian. 134. *pl. 59.* 1775, not *Psychotria latifolia* Humb. & Bonpl. 1819. *R. erecta* Aubl. op. cit. 156. 1775. *P. axillaris* Willd. Sp. Pl. 1: 962. 1798.—The genus *Ronabea* is maintained as distinct by Bremekamp in the *Flora of Surinam*, a treatment that has much justification, but on the whole it seems more practical to leave the single species in *Psychotria* where most authors have been content to place it.

Psychotria Schippii Standl. & Steyerm., sp. nov.—Subgenus *Mapouria.* Frutex vel arbor saepe 5–9-metralis, trunco interdum 5–10 cm. diam., ramulis subteretibus glabris viridescentibus vel brunnescentibus interdum lenticellis magnis elongatis conspersis; stipulae caducae usque 1.5 cm. longae attenuatae glabrae firmae; folia majuscula breviter petiolata crasse membranacea vel subcoriacea, petiolo crasso 1–2.5 cm. longo, saepe fere ad basin marginato; lamina elliptica vel oblongo-elliptica 11–19 cm. longa 5–9.5 cm. lata abrupte acuminata vel caudato-acuminata, basi acuta vel subito contracta et longe decurrens, supra in sicco lucida glabra, subtus paullo pallidior glabra sed in axillis nervorum saepius breviter sparseque barbata, nervis lateralibus utroque latere ca. 14 prominentibus angulo lato adscendentibus arcuatis; inflorescentia terminalis sessilis cymoso-paniculata copiose ramosa in statu fructifero plus minusve laxa multiflora, ca. 6 cm. longa et 8 cm. lata, ramis basalibus 3–4 crassiusculis ferrugineis glabris, bracteis caducis, floribus sessilibus; fructus ruber globosus glaber 4–5 mm. diam. basi et apice rotundatus, pyrenis dorso obtuse costatis; calyx ad apicem fructus persistens breviter dentatus, dentibus obtusis vel rotundatis

minutis.—British Honduras: In advanced forest, limestone valley, Valentín, El Cayo District. June–July, 1936, *C. L. Lundell* 6193 (type in Herb. Field Mus.). Columbia–Toledo, in 1927, *G. H. Donald* 2. In forest, Guatemalan boundary, 630 meters, occasional, *Schipp* S640.—Guatemala: Uaxactún, April, 1931, *Bartlett* 12534.

In most of its characters *Psychotria Schippii* approaches the common and widespread *P. nervosa* Swartz (*P. undata* Jacq.), but in that the leaves have much fewer nerves and the fruits are oval or ellipsoid, and evidently longer than broad.

Randia habrophlebia Standl. & Steyerm., sp. nov.—Frutex 2–3-metralis, ramis crassis, lateralibus brevibus crassis late divergentibus, foliis ad apices ramulorum dense aggregatis; stipulae brunneae glumaceae extus strigosae, intus dense sericeae; folia breviter petiolata herbacea, petiolo crasso 6–15 mm. longo densissime pilis longis ochraceis subadpressis piloso; lamina suborbicularis usque rotundato-ovata vel late elliptica 6.5–9.5 cm. longa 5.5–7.5 cm. lata, apice late rotundata usque obtusa, basi late rotundata vel obtusa, supra ubique densissime velutino-pilosa, ob nervos venasque plus minusve impressas bullata, subtus grisea vel ochracea ubique dense molliter tomentosa, nervis lateralibus utroque latere ca. 9 angulo acutissimo adscendentibus, venulis nervisque omnibus insigniter prominentibus et reticulatis; bacca terminalis solitaria sessilis globosa 3.5 cm. diam., fere laevis, ecostata, sat dense pilis subadpressis pilosa; semina compressa numerosissima.—Guatemala: Dept. Jutiapa, in thicket along river, vicinity of Jutiapa, alt. 850 meters, October–November, 1940, *Paul C. Standley* 76321 (type in Herb. Field Mus.).

Closely related to *R. monantha* Benth., of the same region, but in that the leaves at maturity are hirsute or pilose with straight, not at all matted hairs; the leaves of the type specimen of *R. habrophlebia* are very old, yet still densely tomentose beneath with matted hairs. The venation, too, is unlike that shown in any specimens of *R. monantha*. It may be expected confidently that flowering specimens of *R. habrophlebia* will afford other characters for separating the two species. The type specimen is almost destitute of spines, but it is assumed that normally the spines are in 4's at the ends of the branches, as in related species of the subgenus *Basanacantha*.

Rondeletia brachistantha Standl. & Steyerm., sp. nov.—Arbor, ramulis gracilibus sed rigidis teretibus, novellis pilis adpressis fulvidis sparse pilosis; stipulae ca. 14 mm. longae reflexae brunneae oblongo-deltoideae obtusae, extus strigosae; folia subcoriacea, petiolo

usque 4 mm. longo; lamina ovata vel ovato-oblonga vel elliptico-oblonga 5–8 cm. longa 2.5–3.5 cm. lata acuta vel subacuminata, apice ipso obtuso, basi rotundata vel anguste rotundata, glabra vel subtus secus nervos sparse hirtella, subtus paullo pallidior, nervis lateralibus utroque latere ca. 5 prominentibus pallidis angulo semirecto adscendentibus; inflorescentia terminalis cymoso-corymbosa dense multiflora 2–5 cm. longe pedunculata 3–6 cm. longa 4–9.5 cm. lata, e basi triradiata, ramis dense fulvido-strigosis, bracteis minutis, floribus sessilibus vel subsessilibus; hypanthium globosum 1.5 mm. altum dense minute adpresso-hispidulum et primo paullo tomentosum, calyce 0.7 mm. alto, dentibus minutis remotis obtusis; corolla rosea extus ubique dense minuteque strigillosa, tubo 4–5 mm. longo sursum paullo dilatato fauce dense luteo-barbato, lobis late rotundatis vix ultra 1.5 mm. longis patulis intus puberulis; stylus glaber exsertus, antheris inclusis; capsula globosa 4–4.5 mm. lata basi rotundata glabrata loculicide dehiscens; semina 0.7 mm. lata subcompressa fusco-brunnea puncticulata.—Guatemala: Dept. San Marcos, dry upper slopes, Río Vega, near San Rafael and Guatemala–Mexico boundary, Volcán de Tacaná, alt. 2,500–3,000 meters, February, 1940, *Julian A. Steyermark* 36286 (type in Herb. Field Mus.).

Differing from *R. cordata* Benth. chiefly in the very small corollas, those of that species being almost twice as large. Further material will be necessary to decide whether the plant here described can be maintained as a distinct species.

Rondeletia Cordovana Standl. & Steyerm., sp. nov.—Arbuscula fere glabra, ramulis subteretibus, novellis sparse minute strigillosis; stipulae e basi triangulari subulatae ca. 3 mm. longae erectae; folia parva membranacea, petiolo gracili 5–10 mm. longo sparse minuteque strigilloso vel fere glabro; lamina lanceolato-oblonga 5.5–7.5 cm. longa 1.7–2.5 cm. lata longissime attenuato-acuminata, basi acuta, supra ad costam prominentem sparse minute pilosula vel omnino glabra, nervis non elevatis, subtus pallidior, in axillis nervorum barbata, aliter glabra, nervis lateralibus utroque latere ca. 6 arcuatis angulo lato adscendentibus; inflorescentia terminalis 1.5 cm. longe pedunculata erecta cymoso-corymbosa pauciflora ca. 3 cm. alta et 4.5 cm. lata basi trichotoma, floribus ad apices ramorum primariorum dense cymoso-aggregatis sessilibus vel usque 3 mm. longe pedicellatis, bracteis inferioribus foliaceis foliis conformibus sed parvis, usque 2 cm. longis, superioribus subulatis minutis; hypanthium obovoideum 1.5–2 mm. longum dense minute pallido-strigillosum; calyx maxime inaequaliter 4-lobus, lobis 3 linearibus vel lineari-subulatis ca.

3 mm. longis, quarto lanceolato-oblongo 5–6 mm. longo obtuso, omnibus sparse strigillosis vel fere glabris; corolla in alabastro apice obtusissima extus dense minuteque strigillosa.—Guatemala: Dept. Zacapa, cloud forest in ravine bordering Quebrada Alejandría, summit of Sierra de las Minas, vicinity of Finca Alejandría, alt. 2,500 meters, October, 1939, *Julian A. Steyermark* 29906 (type in Herb. Field Mus.).

The most closely related species is *R. aetheocalymna* Donn. Smith, of Alta Verapaz, in which the much larger leaves are oval, and the small calyx lobes are oval. The present species is dedicated to Don Alejandro Córdova, distinguished journalist of Guatemala, and proprietor of Finca Alejandría, where the junior author was a guest when the type material was collected.

COMPOSITAE

Liabum tajumulcense Standl. & Steyerm., sp. nov.—Frutex 4.5–5 m. altus, ramulis arachnoideo-tomentosis; folia non visa; capitula discoidea in paniculas multifloras contractas thyrsoideas disposita, ramis dense ochraceo-tomentosis; bracteae ovatae vel lanceolatae 4–6 mm. longae extus dense lanuginosae intus glabrae, pedicellis dense tomentosis; involucrum campanulatum 4-seriatum 14–16 mm. altum, 17–20 mm. latum, bracteis 5–13 mm. longis gradatis ovato-lanceolatis usque lineari-lanceolatis acuminatis, extus ochraceo-lanuginosis; discus luteus 1.5–2 cm. altus 1.5–2 cm. latus; corollae 12–13 mm. longae; achaenia immatura 5-costata compressa 4 mm. longa 1.5 mm. lata, dense sericeo-hirsutula; pappi setae inaequales, interiores 35–40 corollam fere aequantes 10–11 mm. longae, exterioribus brevioribus.—Guatemala: Dept. San Marcos: Moist thicket bordering stream, barrancos southwest of Tajumulco, northwestern slopes of Volcán de Tajumulco, alt. 2,300–2,500 meters, February, 1940, *Julian A. Steyermark* 36543 (type in Herb. Field Mus.).

Apparently related to *L. Deamii* Rob. & Bartl., but differing in its much larger heads and flowers; distinguished from *L. Klattii* Rob. & Greenm. by the densely lanuginose and more numerous involucral bracts and broader heads.

Stevia vulcanicola Standl. & Steyerm., sp. nov.—Frutex 2–3-metralis, caulibus glutinosis; folia opposita petiolata elliptico-ovata usque ovata viscido-glutinosa pinnatinervia, 15–30 cm. longa 7–12 cm. lata, arcte crenato-dentata, supra puberula, acuta vel acuminata, basi abrupte cuneatim contracta, petiolo anguste alato 2–9 cm. longo;

inflorescentia corymbosa terminalis dense fastigiato-ramosa, ramis glabratis vel villosis; capitula 11–14 mm. alta sessilia vel breviter pedicellata; involucrum pallide viride, bracteis linearibus acuminatis vel cuspidatis sparse dorso hispidulis; corolla rosea vel pallide lilacina 6.5–7 mm. longa glandulosa; achaenia linearia ad angulos sparse hispidula fuscescentia 5.5–7 mm. longa, corona brevi acute dentata; setae nullae.—Guatemala: Dept. Quezaltenango: Pine-fir forest, Volcán de Santo Tomás, alt. 2,500–3,700 meters, January, 1940, *Julian A. Steyermark* 34757 (type in Herb. Field Mus.); also numerous other collections from the departments of Quezaltenango and San Marcos.

Similar to *S. polycephala* Bertol., but differing in its larger broader leaves, more contracted at the base, the margins with more salient and regular serrations.

UNIVERSITY OF ILLINOIS-URBANA
3 0112 049897595